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各PCTガゼットの巻頭に掲載されている「コードと略語
のガイダンスノート」を参照。

(54) Title: PROCESS FOR PREVENTING DEVELOPMENT DEFECT AND COMPOSITION FOR USE IN THE SAME

(54) 発明の名称: 現像欠陥防止プロセスおよびそれに用いる組成物

(57) Abstract: A composition for preventing development defects which contains (1) a salt of a C₄₋₁₅ perfluoroalkylcarboxylic acid, C₄₋₁₀ perfluoroalkylsulfonic acid, or perfluoroadipic acid with ammonium, a tetraalkylammonium, or a C₁₋₄ alkanolamine or (2) a salt of an inorganic acid with a quaternary fluoroalkylammonium salt, and in which the acid/base equivalent ratio is from 1/1 to 1/3. This composition is applied to a positive-acting chemical amplification type photoresist film formed on a substrate having a diameter as large as 8 inches or more. Before and/or after application of the composition for preventing development defects, the chemical amplification type photoresist film is baked. This photoresist film is subjected to exposure and post-exposure baking and is then developed. Thus, the decrease in photoresist film thickness through development can be larger by 100 to 600 Å than that in the case where the composition for preventing development defects is not applied. Development defects on substrates having a diameter as large as 8 inches or more are diminished, and resist patterns having a satisfactory sectional shape free from T-top or the like are formed.(57) 要約: 8インチ以上の大口径基板上に形成されたポジ型化学増幅型フォトリソ膜上に、酸と塩基の当量比が1:1~1:3として形成された(1)C₄~C₁₅のパーフルオロアルキルカルボン酸、C₄~C₁₀のパーフルオロアルキルスルホン酸あるいはパーフルオロアジピン酸のアンモニウム塩、テトラアルキルアンモニウム塩またはC₁~C₄のアルカノールアミン塩、または(2)無機酸のフッ素化アルキル4級アンモニウム塩を含む現像欠陥防止用組成物を塗布し、前記現像欠陥防止用組成物を塗布する前およびまたは塗布後に化学増幅型フォトリソ膜をベークした後、露光、露光後ベークを行い、現像する。これにより、現像欠陥防止用組成物を塗布しない場合に比べ現像処理後のフォトリソ膜の膜厚の減少量が、更に100Å~600Å大きくされ、8インチ以上の大口径基板における現像欠陥が低減されるとともに、T-トップ形状などのない良好な断面形状のレジストパターンが形成される。

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/29493 A1 (Clariant International Ltd.), 03 January, 2002 (03.01.02), Full text & JP 2002-6514 A & EP 1306726 A1	1, 2
X	JP 2001-133984 A (Shin-Etsu Chemical Co., Ltd.), 18 May, 2001 (18.05.01), Full text (Family: none)	1, 2
X	JP 2002-148821 A (Shin-Etsu Chemical Co., Ltd.), 22 May, 2002 (22.05.02), Full text (Family: none)	1, 2

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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Date of the actual completion of the international search
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INTERNATIONAL SEARCH REPORT

International application No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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